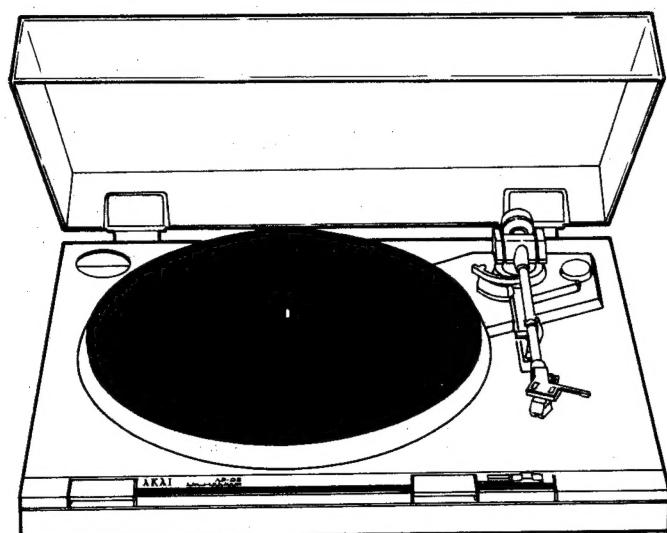
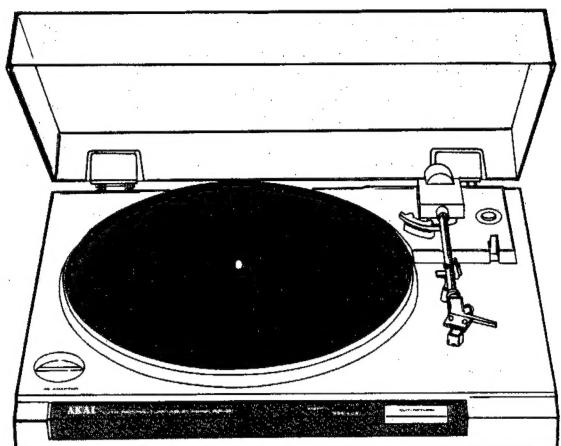


AKAI SERVICE MANUAL



AUTO RETURN TURN TABLE

MODEL AP-B1/C

DIRECT DRIVE TURN TABLE

MODEL AP-D2/C



AP-B1/C



AP-D2/C

AUTO RETURN TURNTABLE

MODEL AP-B1/C

DIRECT DRIVE TURNTABLE

MODEL AP-D2/C

THIS MANUAL IS APPLICABLE TO BOTH SILVER AND PEARL SHADOW PANEL MODELS

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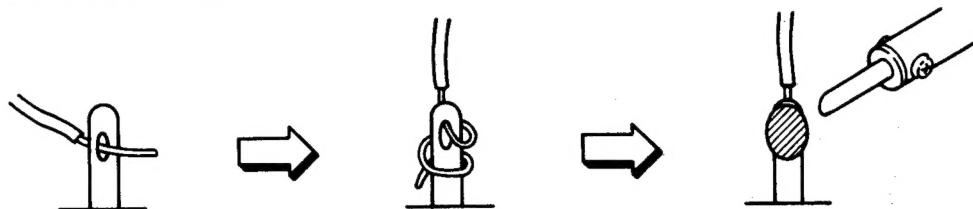
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

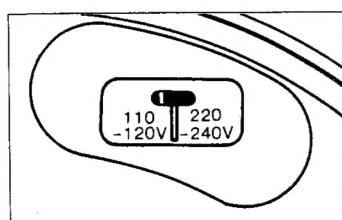
Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for **C** or **A**, specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks, line-in-out jacks etc.).

PRECAUTIONS DURING SERVICING

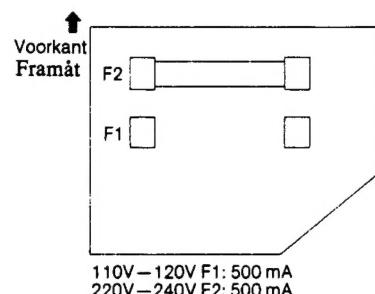
1. Parts identified by the **Δ** symbol parts are critical for safety.
Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
 - 1) Insulation Tape
 - 2) PVC tubing
 - 3) Spacers (Insulating Barriers)
 - 4) Insulation sheets for transistors
 - 5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.
10. Voltage Conversion
Models for Canada, USA, Europe, UK and Australia are not equipped with this facility.
Each unit is preset at the factory depending on its destination, but some units can be converted to 110-120V or to 220-240V as required.
If voltage change is necessary, this can be accomplished as follows:
 - 1.) Disconnect the power cord.
 - 2.) Remove the bottom cover.
 - 3.) AP-B1/C: move the VOLTAGE SELECTOR located on the cabinet under the platter, with a screwdriver so that the marker is below the Voltage for your area.
 - 4.) AP-D2/C: remove the existing Line Voltage Fuse and insert the required Line Voltage Fuse in the proper fuse holder according to the printed instructions.



AP-B1/C



AP-D2/C



SECTION 1

SERVICE MANUAL

MODEL AP-B1/C

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* For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

TURN TABLE (PLATTER)	Aluminum alloy diecast
DRIVE SYSTEM	Belt Drive, Auto return
MOTOR	DC Motor
SPEED	33-1/3, 45 rpm
WOW AND FLUTTER	0.05% (WRMS)
RUMBLE	65 dB (DIN-B)
TONE ARM	Static balanced strait type
EFFECTIVE ARM LENGTH	215 mm
STYLUS PRESSURE ADJUSTMENT RANGE	0 to 2.5 grams
APPLICABLE CARTRIDGE WEIGHT	5 to 9 grams
ARM LIFTER	Oil Damped
OVERHANG	15 mm
CARTRIDGE	MM (Moving Magnet) Type, (Replacement Stylus PC-82) (Model AP-B1 does not include cartridge.)
OUTPUT VOLTAGE	2.5 mV (DIN)
CHANNEL SEPARATION	More than 20 dB
OPTIMAL STYLUS PRESSURE	2 grams
POWER REQUIREMENTS	120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110-120V/220-240V, 50/60 Hz switchable for other countries
POWER CONSUMPTION	U/T, CSA, AAL 3W
DIMENSIONS	440 (W) x 107 (H) x 345 (D) mm (17.3 x 4.2 x 13.6 inches)
WEIGHT	3.4 kg (7.5 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

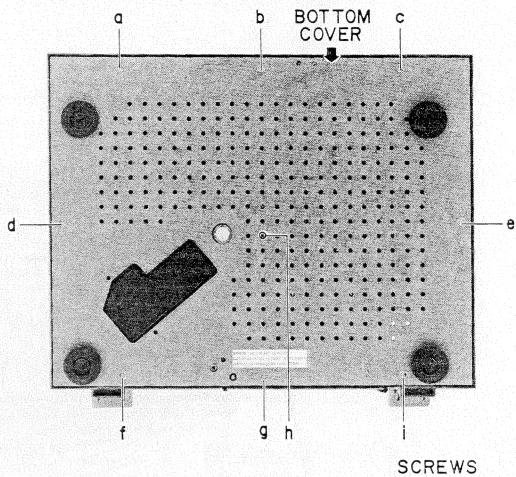
II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

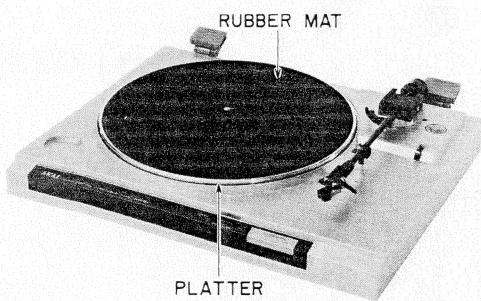
1



3



2



4



III. CONTROLS

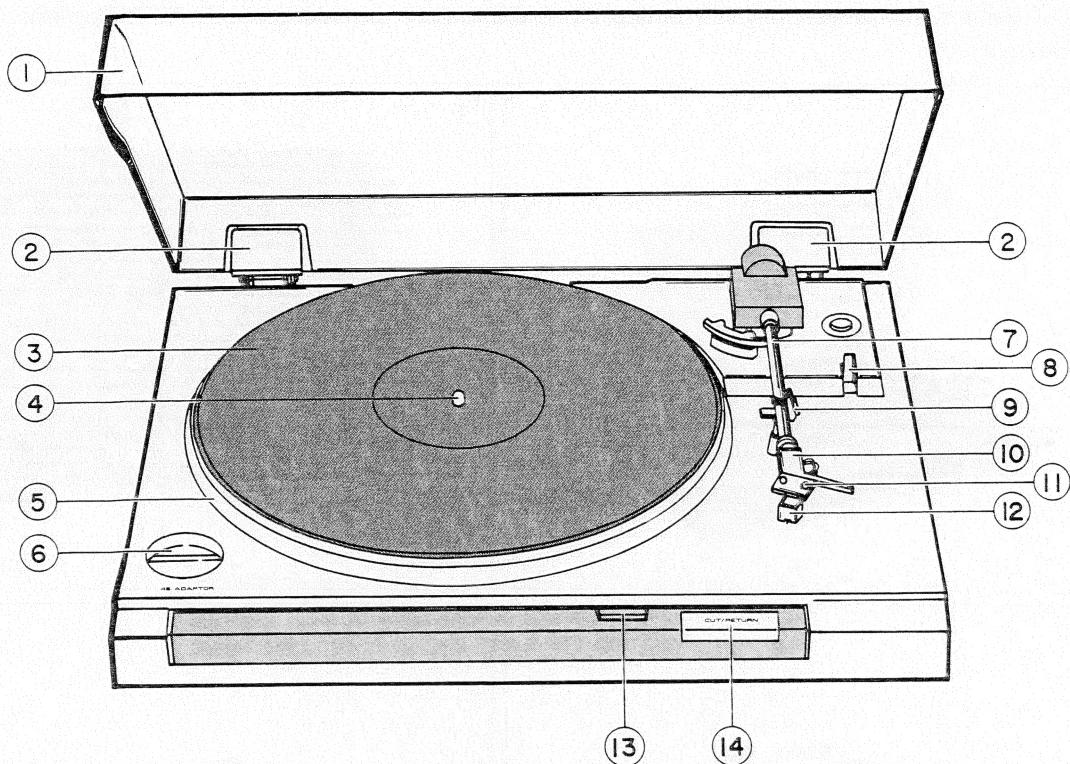


Fig. 3-1 CONTROLS (1)

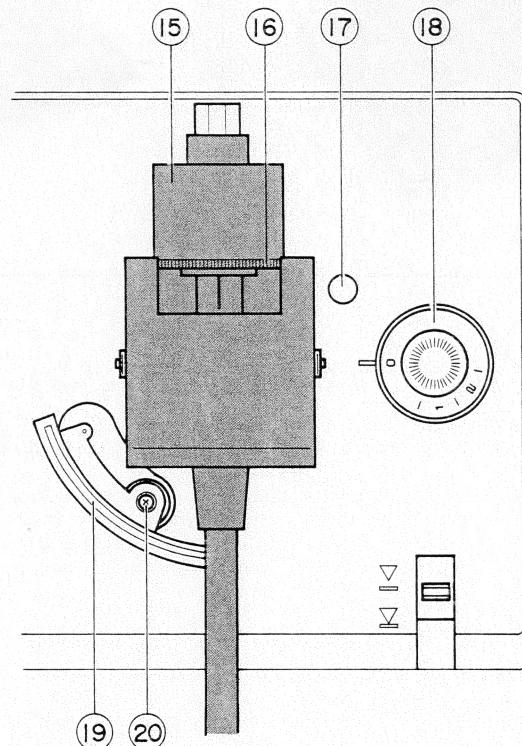


Fig. 3-2 CONTROLS (2)

1. DUST COVER	11. CARTRIDGE RE-SETTING SCREWS
2. HINGE	12. CARTRIDGE (AP-B1C ONLY)
3. RABBER MAT	13. SPEED SELECTOR
4. SPINDLE	14. CUT/RÉTURN SWITCH
5. PLATTER	15. MAIN WEIGHT
6. 45rpm ADAPTER HOLDER	16. STYLUS PRESSURE SCALE RING
7. TONE ARM	17. AUTO-RETURN ADJUSTMENT SCREW
8. CUEING LEVER	18. ANTI SKATING ADJUSTER
9. TONE ARM REST	19. TONE ARM LIFTER
10. HEAD SHELL	20. TONE ARM LIFTER HEIGHT ADJ. SCREW

IV. PRINCIPAL PARTS LOCATION

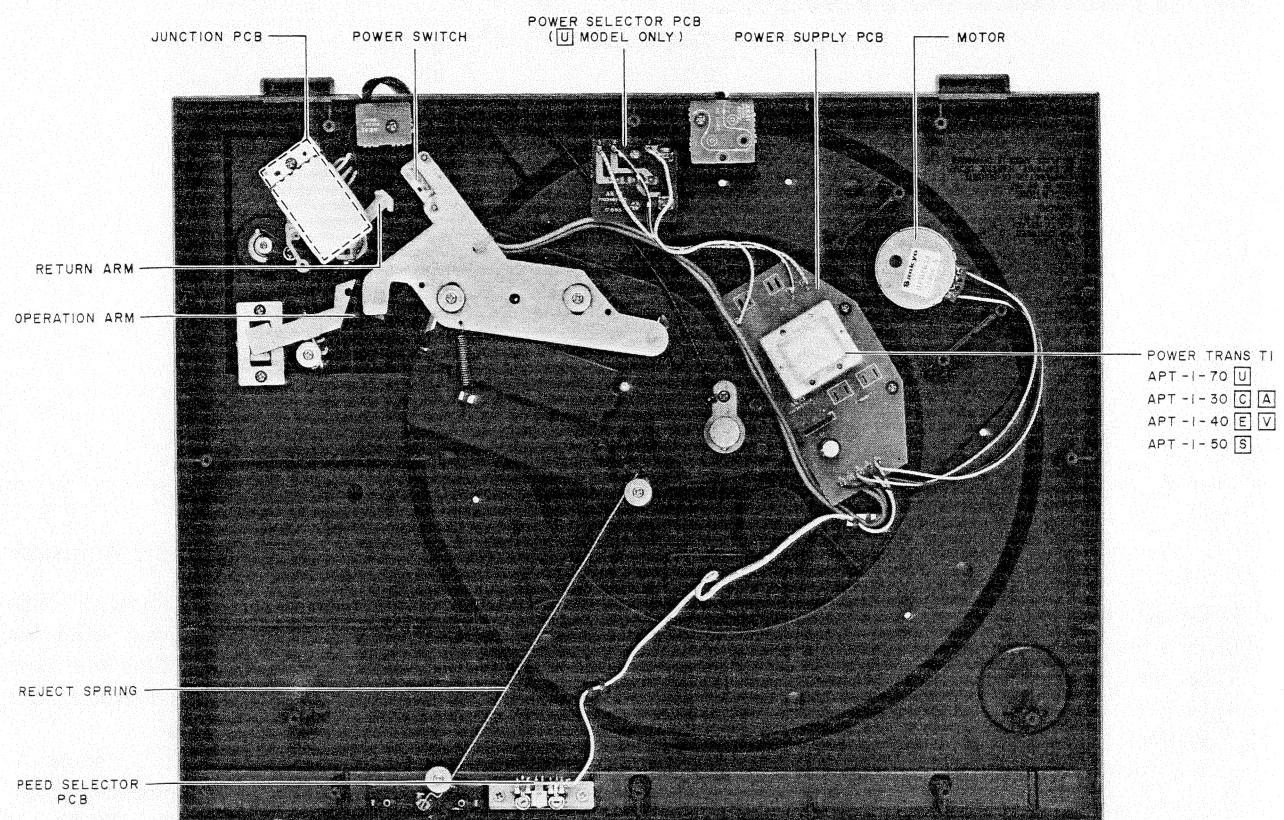


Fig. 4-1 Principal Parts Location (Bottom View)

V. ORDINARY ADJUSTMENT

5-1. STYLUS PRESSURE ADJUSTMENT (Refer to Fig. 5-1)

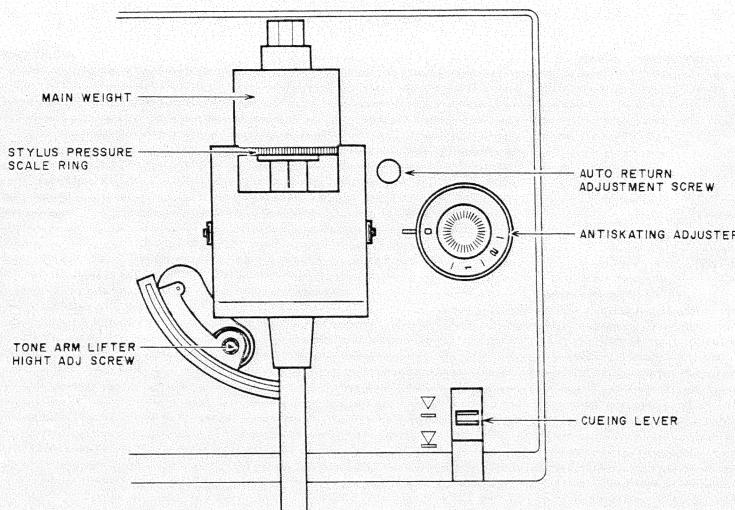


Fig. 5-1 Stylus Pressure Adjustment

- 1) Connect the Power Cord.
- 2) Turn the ANTISKATING Adjuster to 0.
- 3) Set the Cueing lever to \triangle .
- 4) Unlock the Tone Arm and bring it towards the Platter.
* Remove the Stylus Guard being careful not to damage the Stylus.
- 5) With the Tone Arm held midway between the Tone Arm Rest and the rim of the Platter, adjust the Main Weight until the Tone Arm is in perfect horizontal balance.
- 6) Without moving the Main Weight, rotate the Stylus Pressure Scale Ring only to match the "0" mark with the mark on the weight shaft.

5-2. OVERHANG ADJUSTMENT (Refer to Fig. 5-2)

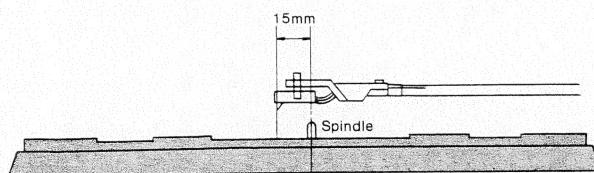


Fig. 5-2 Overhang Adjustment

The distance between the turntable Spindle and the Stylus when the Tone Arm is centered over the Platter is known as the overhang.

Different cartridges require different overhang adjustments.

- 1) Disconnect the Power Cord.
- 2) Center the Tone Arm over the Platter.
- 3) Adjust the cartridge position in the shell so that the Stylus position is 15mm from the Spindle.
* The cartridge position can be adjusted by resetting the screws in the shell.

- 7) Lock the Tone Arm in place and rotate the Main Weight counterclockwise, as viewed from the front (the Stylus Pressure Scale Ring will move with it), until the desired Stylus Pressure Scale indication is at the mark on the shaft.
The range of adjustment is from 0 to 2.5 grams.
* For AP-B1C only: The recommended Stylus Pressure for the cartridge supplied, PC-82 is 2 grams.
- 8) Set the ANTISKATING adjuster to the corresponding Stylus Pressure.

5-3. TONE ARM LIFTER HEIGHT ADJUSTMENT (Refer to Figs. 5-1 & 5-3)

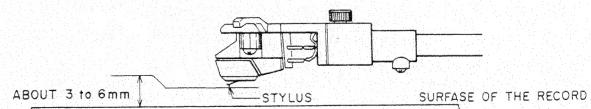


Fig. 5-3 Tone Arm Lifter Height Adjustment

With the Tone Arm in the up-position, the Stylus should be 3 to 6 mm above the surface of the record. If it is not, increase the height by adjusting the Tone Arm Lifter Height Adjustment Screw.

Clockwise: Down

Counterclockwise: Up

VI. MECHANISM ADJUSTMENT

6-1. AUTO-RETURN ADJUSTMENT (Refer to Fig. 6-1)

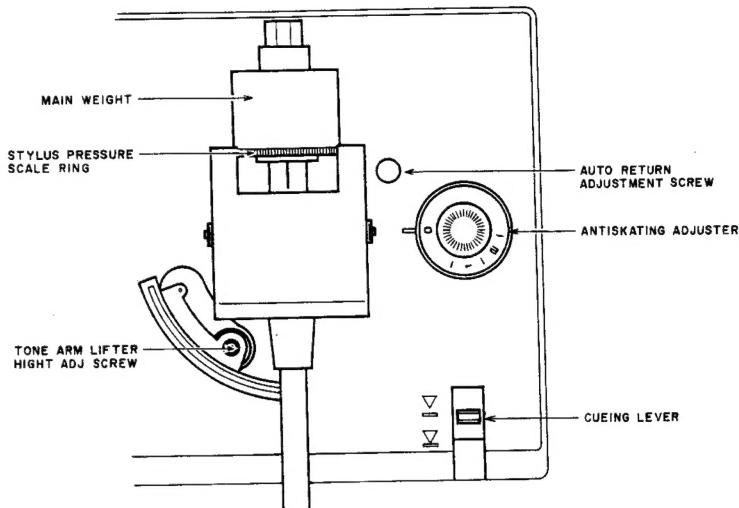


Fig. 6-1

If the Tone Arm does not return automatically to the Tone Arm Rest at the end of the play back, or does so during playback:

- 1) Leave the Power Cord connected.
- 2) Adjust the Auto-Return Adjustment Screw.
Turn clockwise: If the Tone Arm returns before the end of record.
Turn counterclockwise: If the Tone Arm does not return at the end of record.

* Do not turn the Screw counterclockwise too much.

NOTE:

AKAI recommends that a record be placed on the Platter and auto-return operation be carried out after each adjustment to confirm that the adjustment is successful.

6-2. RETURN ARM POSITION ADJUSTMENT

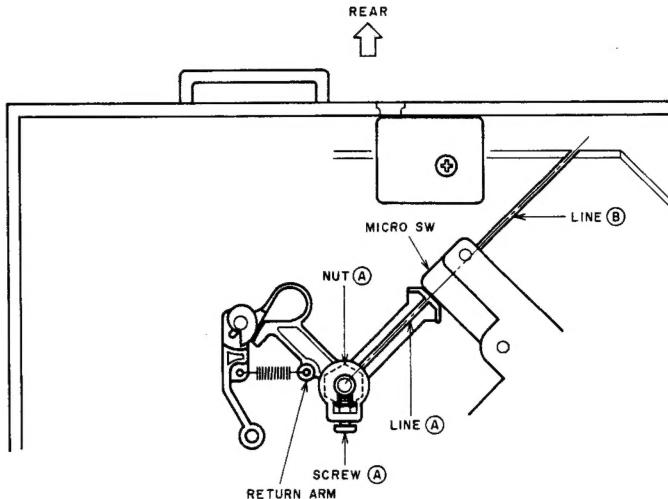


Fig. 6-2

(In case, the TONE ARM was replaced or the proper AUTO RETURN position could not obtained in item 6-1.)

- 1) Lock the TONE ARM on the ARM REST.
- 2) Confirm that RETURN ARM is installed all the way in to the nut (A).
- 3) May loosen the screw (A) a little and turn the RETURN ARM so that the line (A) on the RETURN ARM is aligned with the line (B) on the cabinet as shown in Fig. 6-2, then tighten the screw (A).

- 4) Next, execute an AUTO RETURN operation and confirm that the AUTO RETURN position is proper.
Do the fine adjustment in item 6-1 if necessary.
- 5) Paint-lock the screw (A) after the adjustment.

VII. ELECTRICAL ADJUSTMENT

7-1. SPEED ADJUSTMENT

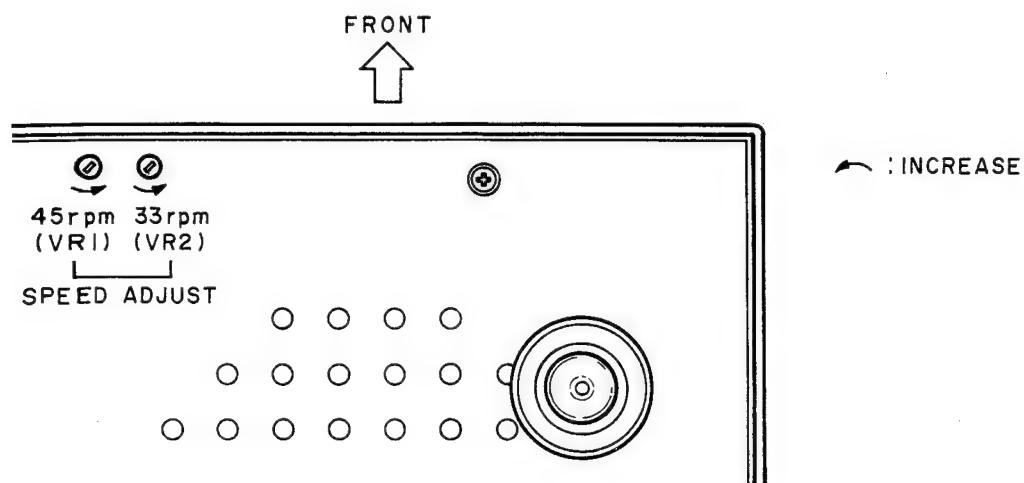


Fig. 7-1 SPEED ADJUSTMENT

- 1) Set the Speed Selector to 33-1/3 rpm.
- 2) Playback the Test Record (33-1/3 rpm, 1000Hz).
- 3) Adjust VR2 so that the speed is $1000 \pm 5\text{Hz}$.
- 4) Set the Speed Selector 45 rpm.
- 5) Playback the Test Record (45rpm, 1000Hz).
- 6) Adjust VR1 so that the speed is $1000 \pm 5\text{Hz}$.

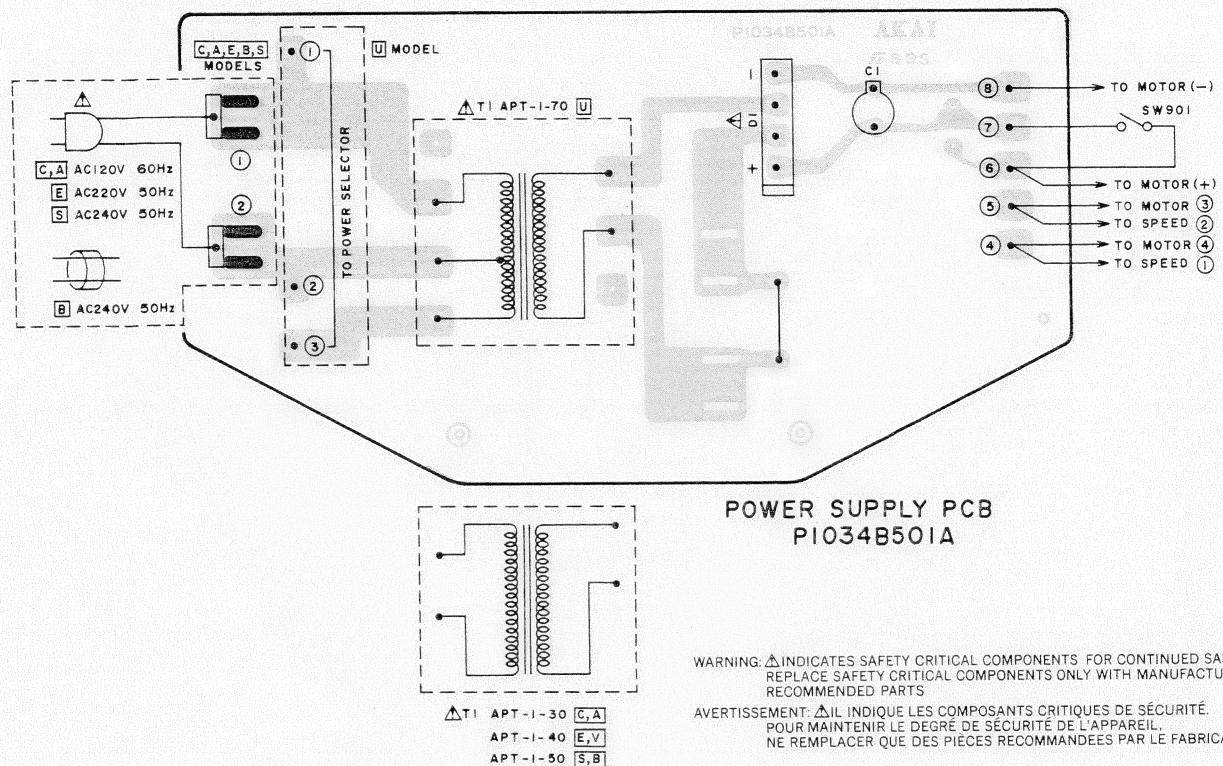
VIII. CLASSIFICATION OF VARIOUS P.C. BOARDS

8-1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

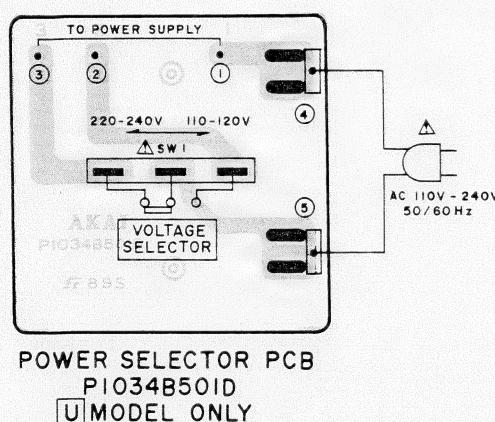
P.C BOARD TITLE	P.C BOARD NUMBER	NOTES
POWER SUPPLY P.C BOARD	P1034B501A	
POWER SELECTOR P.C BOARD	P1034B501D	[U]only
SPEED SELECTOR P.C BOARD	P1034B501C	
JUNCTION P.C BOARD	P1034B501B	

8-2. COMPOSITION OF VARIOUS P.C BOARDS

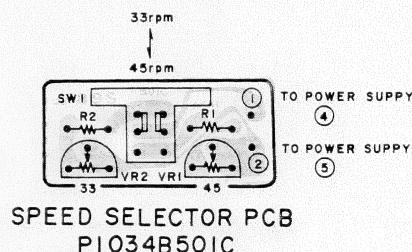
1) POWER SUPPLY P.C BOARD P1034B501A



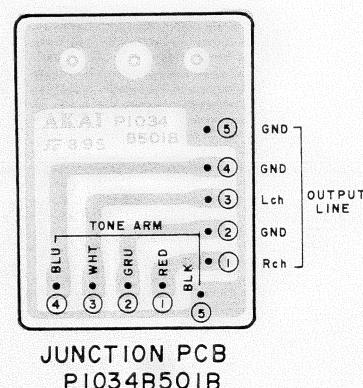
2) POWER SELECTOR P.C BOARD P1034B501D



3) SPEED SELECTOR P.C BOARD P1034B501C



4) JUNCTION P.C BOARD P1034B501B



—MEMO—



SECTION 2

SERVICE MANUAL

MODEL AP-D2/C

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For basic adjustment, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

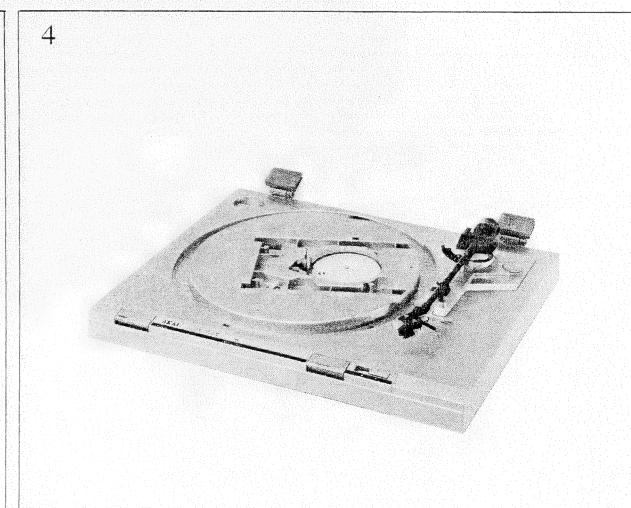
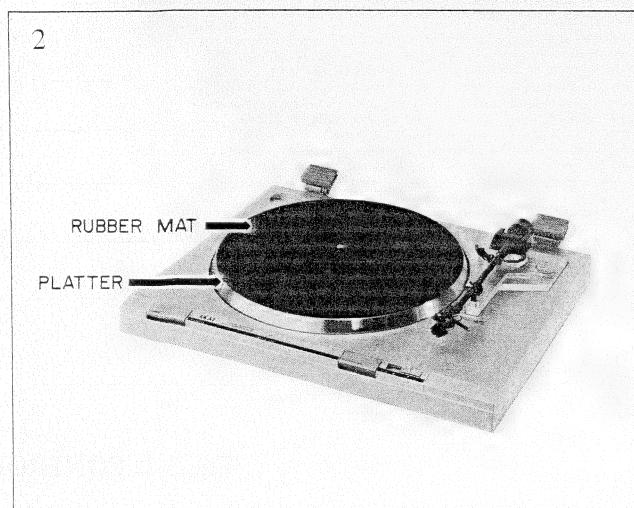
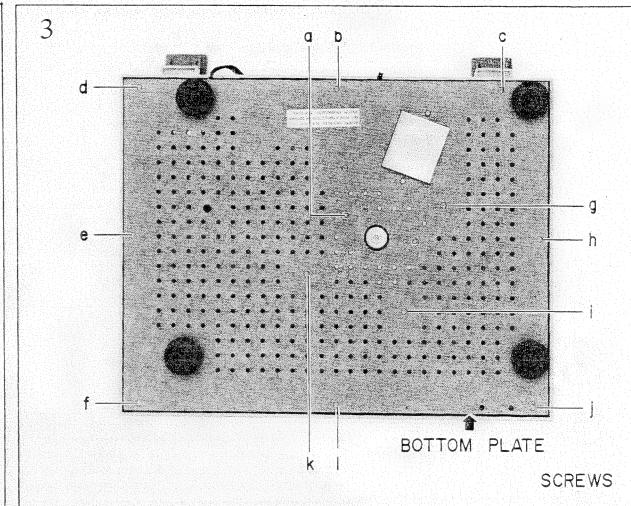
I. SPECIFICATIONS

TURN TABLE	Aluminum alloy diecast
DRIVE SYSTEM & MECHANISM	FG Servo Direct Drive Automatic
MOTOR	DC Servo Motor
SPEED	33-1/3 rpm, 45 rpm
SPEED DEVIATION	±0.5%
WOW AND FLUTTER	0.03% (W RMS)
RUMBLE	73 dB (DIN B)
TONE ARM	Static Balanced Type
EFFECTIVE ARM LENGTH	220 mm
STYLUS PRESSURE ADJUSTMENT RANGE	0 to 2.5 grams
APPLICABLE CARTRIDGE WEIGHT	3 to 7 grams
ARM LIFTER	Oil damped
OVERHANG	15 mm
CARTRIDGE	MM (Moving Magnet) Type (Replacement Stylus RS-85) (Model AP-D2 does not include cartridge.)
OPTIMAL STYLUS PRESSURE	2.0 grams
OUTPUT VOLTAGE	2.5 mV (DIN)
CHANNEL SEPARATION	20 dB
POWER REQUIREMENTS	120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110-120V/220-240V, 50/60 Hz switchable for other countries
POWER CONSUMPTION	5W (U, C, A)
DIMENSIONS	440 (W) x 96 (H) x 359 (D) mm (17.3 x 3.8 x 14.1 inches)
WEIGHT	5.1 kg (11 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.



III. CONTROLS

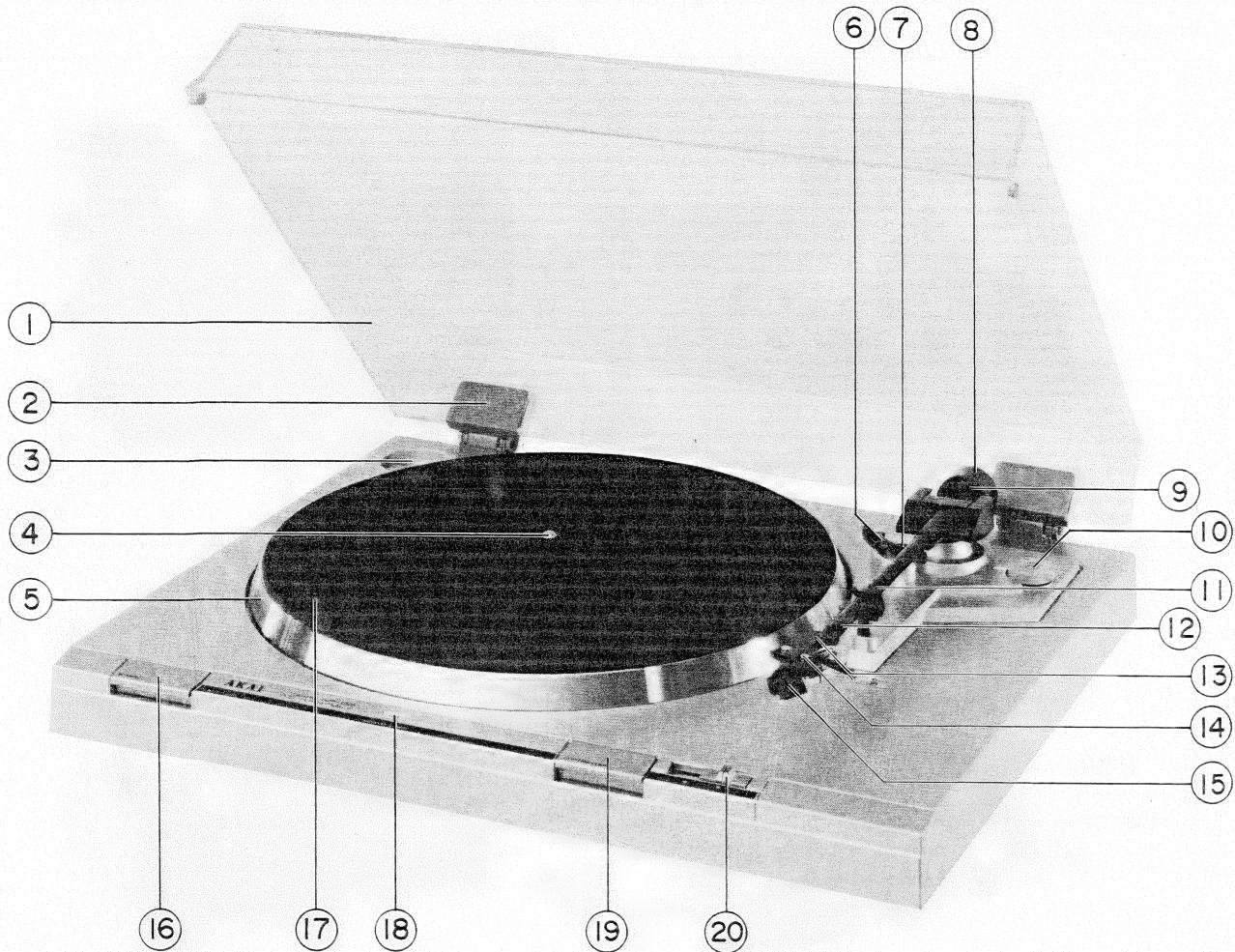


Fig. 3-1 CONTROLS

- 1. DUST COVER
- 2. HINGE
- 3. 45 rpm ADAPTER HOLDER
- 4. SPINDLE
- 5. PLATTER
- 6. TONE ARM LIFTER
- 7. TONE ARM LIFTER HEIGHT ADJUSTMENT SCREW
- 8. MAIN WEIGHT
- 9. STYLUS PRESSURE SCALE RING
- 10. ANTISKATING ADJUSTER

- 11. TONE ARM CLAMP
- 12. TONE ARM
- 13. HEAD SHELL
- 14. CARTRIDGE RE-SETTING SCREWS
- 15. CARTRIDGE (AP-D2C ONLY)
- 16. SPEED SELECTOR (45/33)
- 17. RABBER MAT
- 18. SERVO LOCK INDICATOR
- 19. CUT/RETURN BOTTON
- 20. CUE LEVER

IV. PRINCIPAL PARTS LOCATION

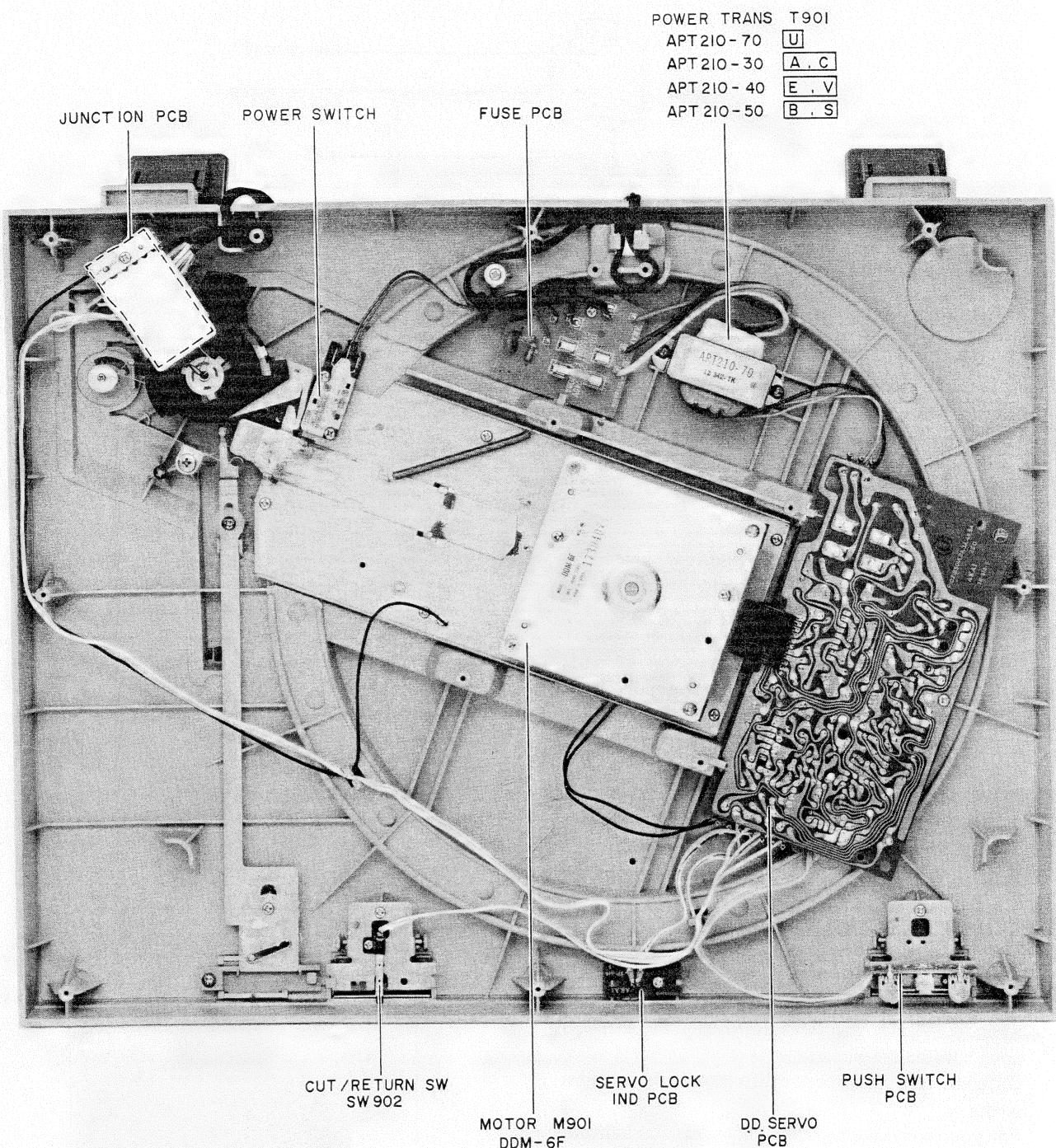


Fig. 4-1 Principal Parts Location (Bottom View)

V. MECHANICAL ADJUSTMENT

5-1. STYLUS PRESSURE ADJUSTMENT (Refer to Fig. 5-1)

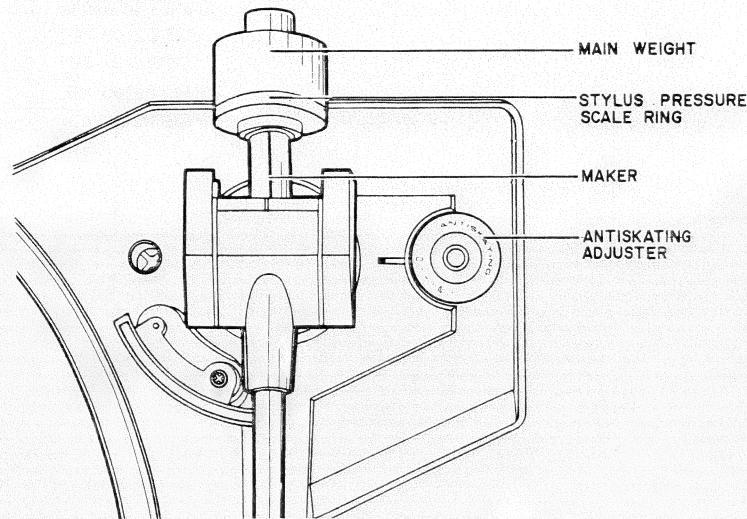


Fig. 5-1 Stylus Pressure Adjustment

- 1) Disconnect the Power Cord.
- 2) Set the ANTISKATING Adjuster to 0.
- 3) Unlock the Tone Arm and bring it towards the Platter.
* Remove the Stylus Guard being careful not to damage the stylus.
- 4) With the Tone Arm held midway between the Tone Arm Rest and the rim of the Platter, adjust the Main Weight until the Tone Arm is in perfect horizontal balance.
- 5) Without moving the Main Weight, rotate the Stylus Pressure Scale Ring only to match the "0" mark with the mark on the weight shaft.
- 6) Return the Tone Arm to the Tone Arm Rest.
- 7) Lock the Tone Arm in place and rotate the Main Weight counterclockwise, as viewed from the front (the Stylus Pressure Scale Ring will move with it), until the desired Stylus Pressure Scale indication is at the mark on the shaft.
The range of adjustment is from 0 to 2.5 grams.
* For AP-D2C only: The recommended stylus pressure for the cartridge supplied, RS-85 is 2 grams.
- 8) Set the ANTISKATING adjuster to the corresponding stylus pressure.

5-2. OVERHANG ADJUSTMENT (Refer to Fig. 5-2)

The distance between the Spindle and the Stylus when the Tone Arm is centered over the Platter is known as the overhang.

Different cartridges require different overhang adjustments.

For your convenience, the Rubber Mat has indicator grooves at the center to facilitate overhang adjustment.

- 1) Disconnect the Power Cord.
- 2) Center the Tone Arm over the Platter.
- 3) Adjust the cartridge so that the Stylus position is even with the Groove for Overhang Adjustment (middle groove ring).
* The cartridge position can be adjusted by resetting the Cartridge Re-setting Screws in the shell.

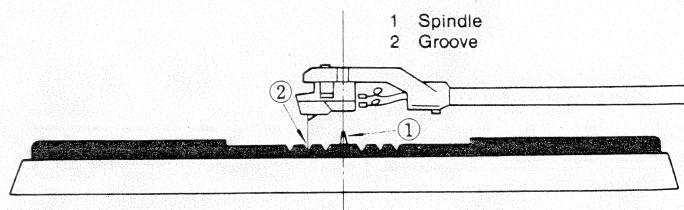
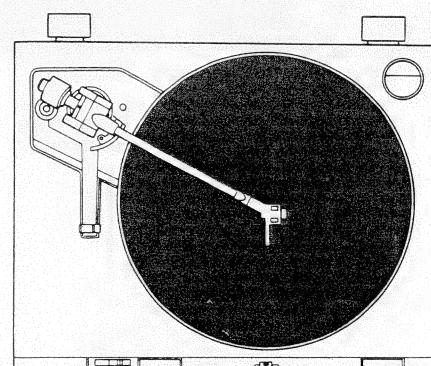


Fig. 5-2 Overhang Adjustment

5-3. TONE ARM LIFTER HEIGHT ADJUSTMENT (Refer to Fig. 5-3)

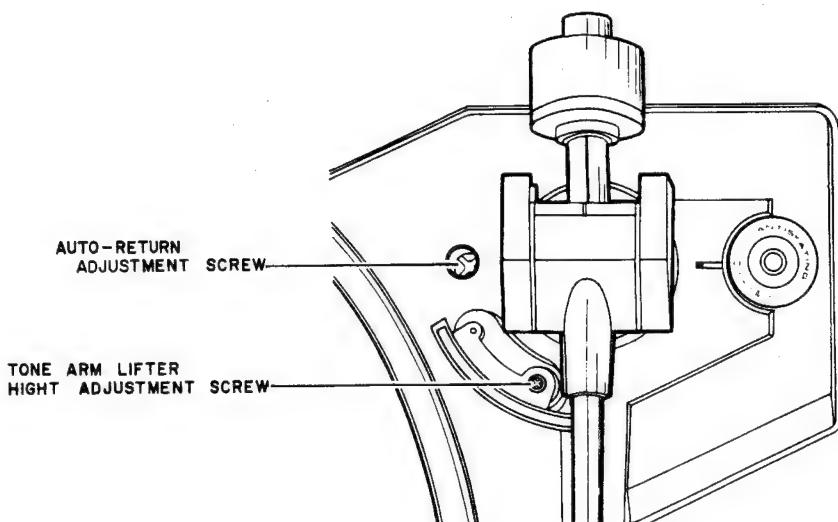


Fig. 5-3 Tone Arm Lifter Height Adjustment & Auto-Return Adjustment

With the Tone Arm in the up-position, the Stylus should be 3 to 6 mm above the surface of the record. If it is not, increase the height by adjusting the Tone

Arm Lifter Height Adjustment Screw.
Clockwise: Down
Counterclockwise: Up

5-4. AUTO-RETURN ADJUSTMENT (Refer to Fig. 5-3)

If the Tone Arm does not return automatically to the Tone Arm Rest at the end of the playback, or does so during playback:

- 1) Leave the Power Cord connected.
- 2) Adjust the Auto-Return Adjustment Screw.
Turn clockwise: If the Tone Arm returns before the end of record.
Turn counterclockwise: If the Tone Arm does not return at the end of record.

* Do not turn the Screw counterclockwise too much.

NOTE:

Akai recommends that a record be placed on the Platter and auto-return operation be carried out after each adjustment to confirm that the adjustment is successful.

VI. ELECTRICAL ADJUSTMENT

6-1. SPEED ADJUSTMENT (Refer to Fig. 6-1)

- 1) Set the Speed Selector to 33-1/3 rpm.
- 2) Playback the Test Record (33-1/3 rpm, 1,000 Hz).
- 3) Adjust VR2 (3 kB) so that the speed is $1,000 \pm 5$ Hz.
- 4) Set the Speed Selector to 45 rpm.
- 5) Playback the Test Record (45 rpm, 1,000 Hz).
- 6) Adjust VR1 (3 kB) so that the speed is $1,000 \pm 5$ Hz.

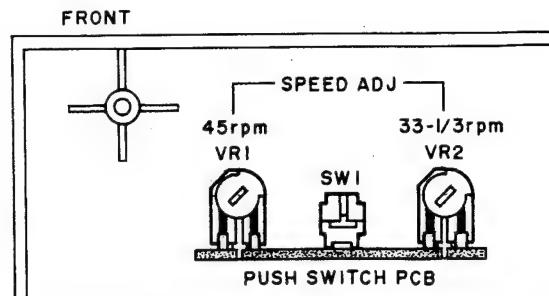
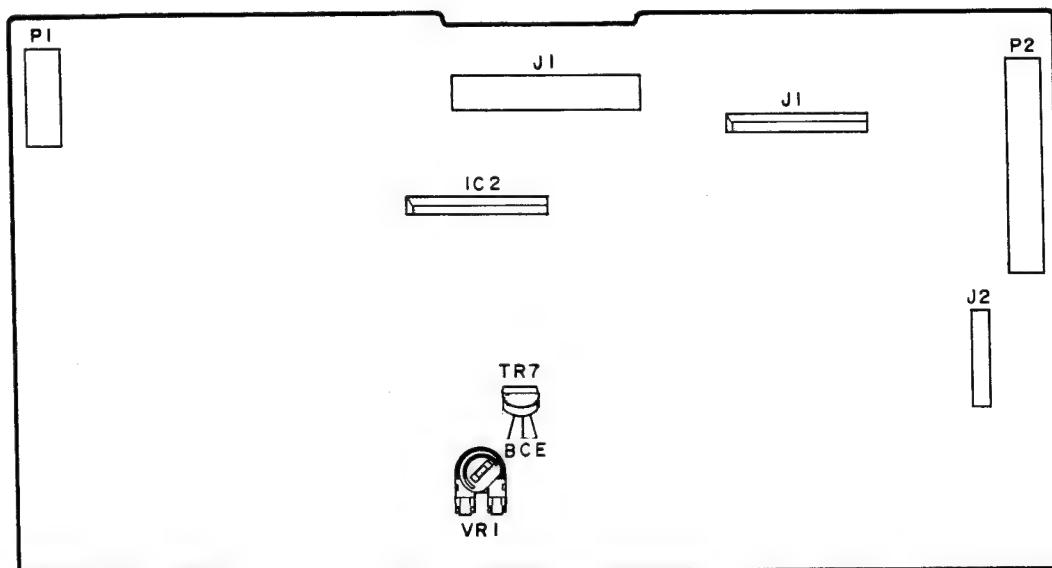


Fig. 6-1 Push Switch PCB

6-2. RETURN SENSOR SENSITIVITY ADJUSTMENT (Refer to Fig. 6-2)



DD SERVO PCB

Fig. 6-2 D.D. Servo PCB

- 1) Move the Tone Arm and turn on the power.
- 2) Connect the DC Voltmeter to Base of TR7.
- 3) Adjust VR1 (5 kB) so that the Base Voltage of TR7 is $2\pm1V$.

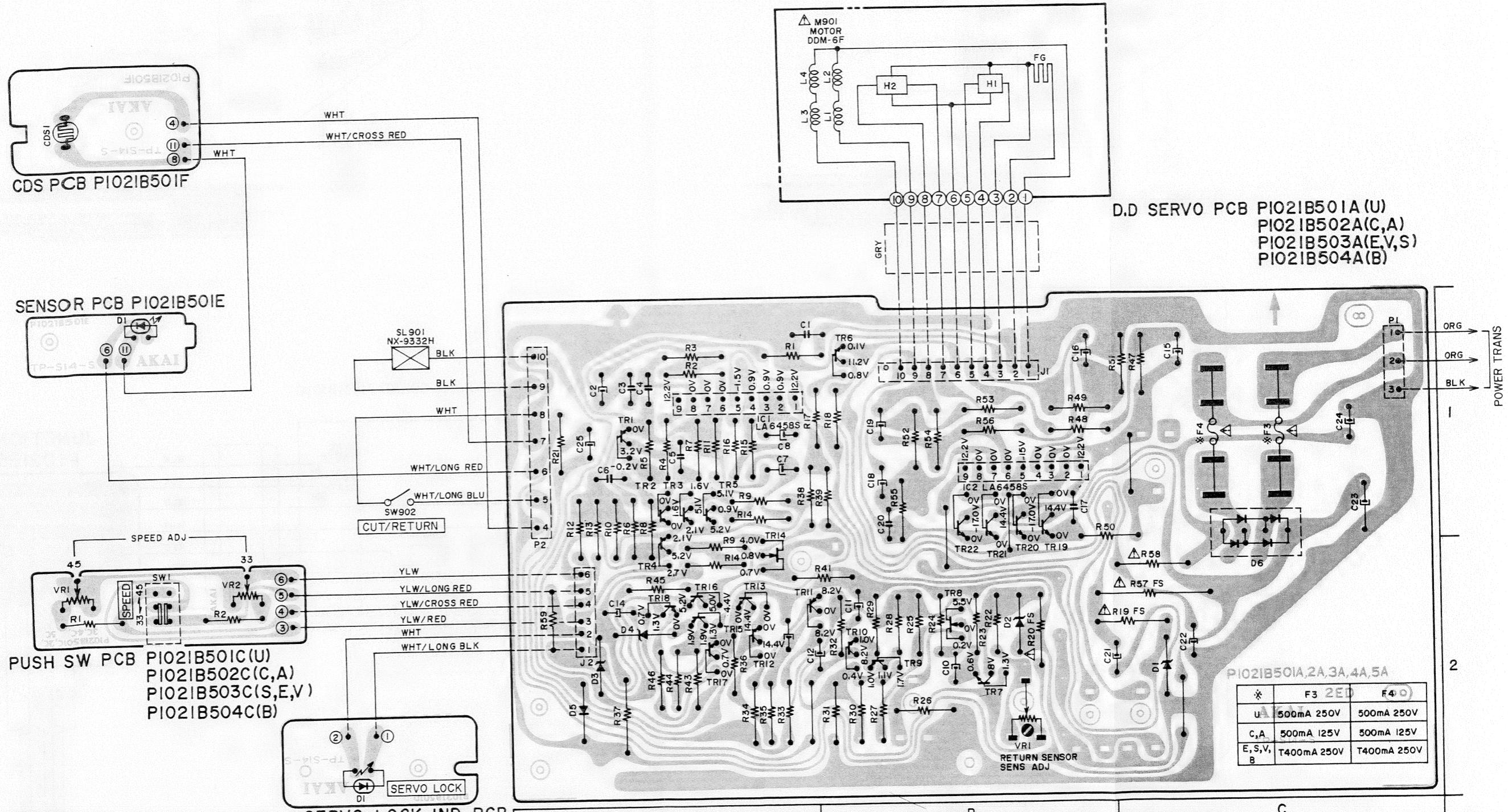
VII. CLASSIFICATION OF VARIOUS P.C. BOARDS

7-1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

P.C BOARD TITLE	P.C BOARD NUMBER	NOTES
D.D. SERVO P.C Board	P1021B501A	U
D.D. SERVO P.C Board	P1021B502A	C, A
D.D. SERVO P.C Board	P1021B503A	E, V, S
D.D. SERVO P.C Board	P1021B504A	B
FUSE P.C Board	P1021B501B	U
FUSE P.C Board	P1021B502B	C, A
FUSE P.C Board	P1021B503B	E, V, S
FUSE P.C Board	P1021B504B	B
PUSH SWITCH P.C Board	P1021B501C	U
PUSH SWITCH P.C Board	P1021B502C	C, A
PUSH SWITCH P.C Board	P1021B503C	E, V, S
PUSH SWITCH P.C Board	P1021B504C	B
SERVO LOCK IND P.C Board	P1021B501D	
SENSOR P.C Board	P1021B501E	
CDS P.C Board	P1021B501F	
JUNCTION P.C Board	P1021B501G	

7-2. COMPOSITION OF VARIOUS P.C BOARDS

1) D.D SERVO P.C BOARD P1021A501A to 504A, CDS P.C BOARD P1021B501F, SENSOR P.C BOARD P1021B501E, PUSH SW P.C BOARD P1021B501C to 504C, SERVO LOCK IND P.C BOARD P1021B501D



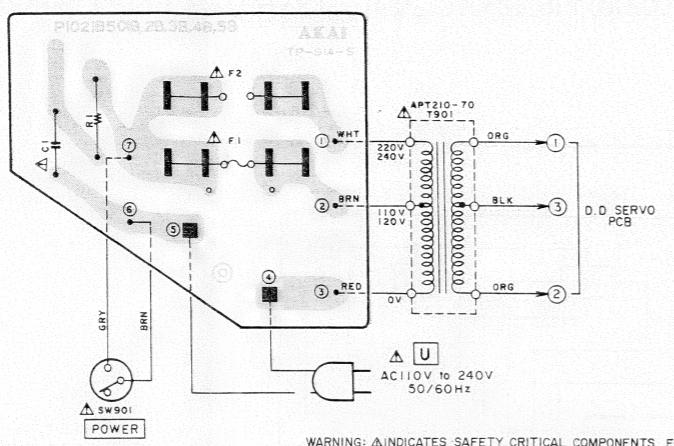
IC1,2 ----- LA6458S
 TR1to4,6,7,12, 17,18 ----- 2SC1815(O,Y)
 TR5,11,15,16 ----- 2SA1015(O,Y)
 TR8,14 ----- 2SK30A(R)
 TR13 ----- 2SC1959(Y)
 TR19,21 ----- 2SD863 (E,F)
 TR20,22 ----- 2SB764 (E,F)
 TR9,10 ----- 2SC536K-NP (F,G)

LOCATION OF IC & TR
 IC1 — A1 TR1 to 5-A1
 IC2 — B1 TR6 — B1
 TR7 to 11-B2
 TR12 to 18-A2
 TR19 to 22-B1

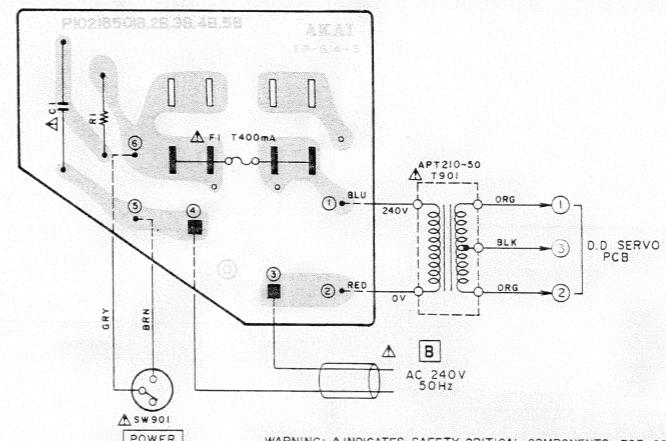
NOTES
 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN OHMS 1/4W (J)
 ALL CAPACITORS IN μ F 50 WV (J)
 (FS) = FAIL SAFE RESISTORS

WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
 REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
 RECOMMENDED PARTS
 AVERTISSEMENT: Δ INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
 POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
 NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

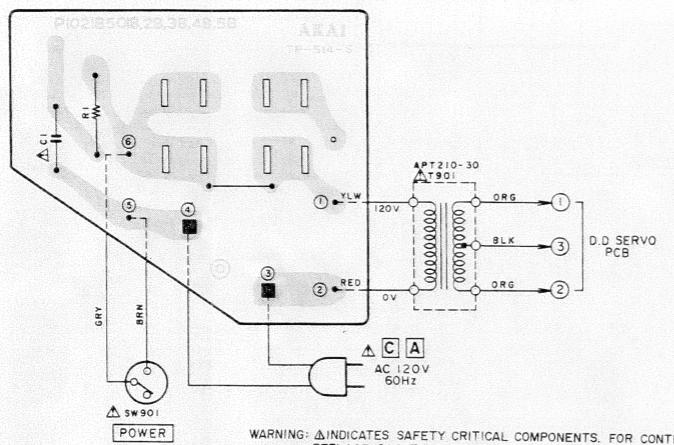
2) FUSE P.C BOARD P1021B501B to 504B



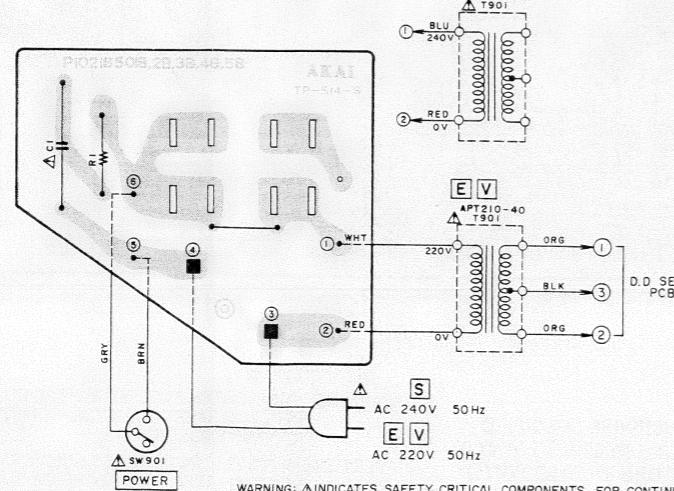
WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDÉES PAR LE FABRICANT



WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDÉES PAR LE FABRICANT

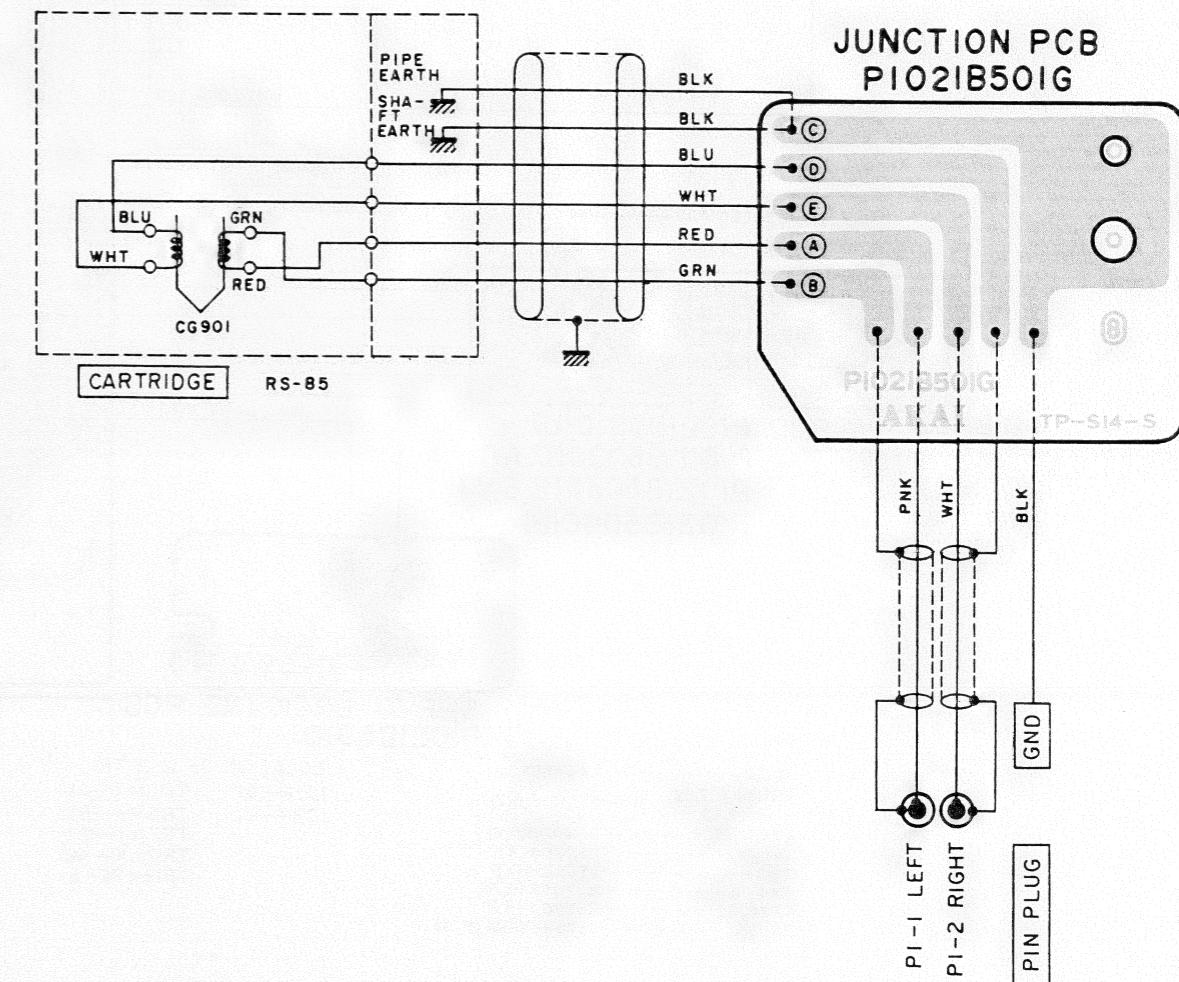


WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDÉES PAR LE FABRICANT



WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDÉES PAR LE FABRICANT

3) JUNCTION P.C BOARD P1021B501G



—MEMO—

—MEMO—

—MEMO—

—MEMO—

SECTION 3

PARTS LIST

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MODEL AP-D2/C

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Resistor and Capacitor which is not listed in this parts list, please refer to
COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no., model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list
 - a) Mechanism Block
 - b) P.C Board Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

SP (Service Parts) Classification
A small "x" indicates the inability to show that particular part in the Photo or Illustration.
This number corresponds with the individual parts index number in that figure
This number corresponds with the Figure Number

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C

SP (Service Parts) Classification
This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

▲ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS

AVERTISSEMENT

▲ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DÉGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

MODEL AP-B1/C

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

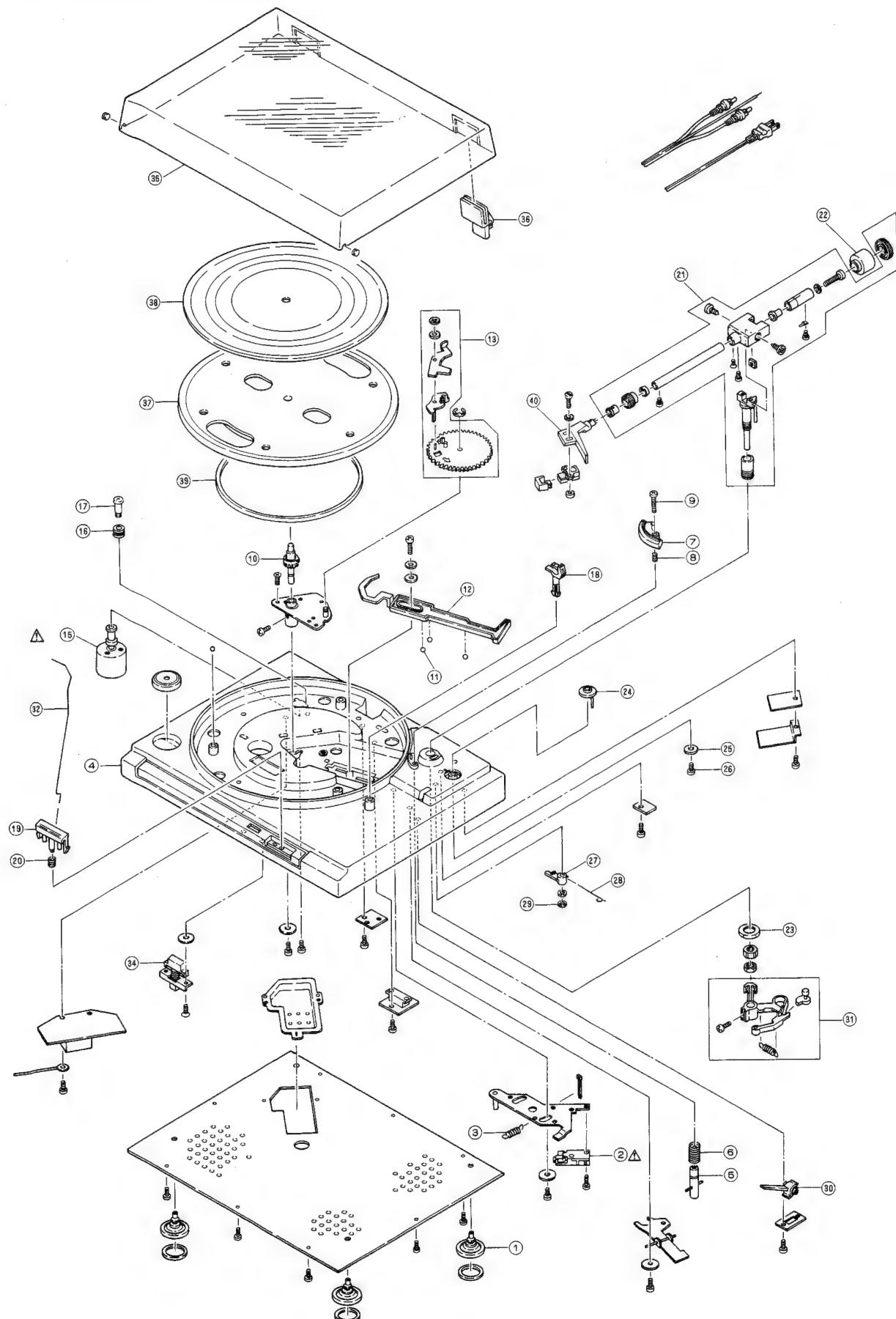
REF. NO. PARTS NO. DESCRIPTION

1	BM-348334	▲ MOTOR (PULLEY) BFB2R28
2	BT-348331	▲ TRANS POWER APT-1-30 (C,A)
3	BT-348332	▲ TRANS POWER APT-1-40 (E)
4	BT-348333	▲ TRANS POWER APT-1-50 (B,S)
5	BT-348330	▲ TRANS POWER APT-1-70 (U)
6	ED-322238	D SILICON 1B4B41 100/1.0A
7	ES-316432	▲ SW MICRO K2 EUC
8	ES-337898	▲ SW SLIDE 00120163 01-2 (U)
9	ES-348289	SW PUSH ESB-62671
10	EV-475470	R S-FIX V V8K1-1 3P 103
11	EV-523214	R S-FIX V V8K1-1 3P 502
12	MB-302866	BELT
13	TP-P1034A080A	GEAR MAIN BLK AP-B1

1. POWER SUPPLY P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
POWER SUPPLY P.C BOARD		
1-T1AU	BT-348330	▲ TRANS POWER APT-1-70 (U)
1-T1AC	BT-348331	▲ TRANS POWER APT-1-30 (C,A)
1-T1AE	BT-348332	▲ TRANS POWER APT-1-40 (E)
1-T1AB	BT-348333	▲ TRANS POWER APT-1-50 (B,S)
1-D1A	ED-322238	▲ D SILICON 1B4B41 100/1.0A
1-IAC	EW-207742	▲ AC CORD 2 CORES VM-0238, SPT-1 UC (C,A)
1-IAE	EW-336923	▲ AC CORD 2 CORES KP-419C, LTCE-2F EV (E)
1-IAB	EW-347023	▲ AC CORD LTBS-2F 42/0.15x2 B (B)
1-IAS	EW-336924	▲ AC CORD 2 CORES KP-560, LTSA-2F S (S)
JUNCTION P.C BOARD		
1-2B	EW-344164	CORD 2P AUDIO PIN X 2
SPEED SELECTOR P.C BOARD		
1-SW1C	ES-348289	SW PUSH ESB-62671 (SPEED)
1-VR1C	EV-475470	R S-FIX V V8K1-1 3P 103
1-VR2C	EV-523214	R S-FIX V V8K1-1 3P 502
POWER SELECTOR P.C BOARD		
1-SW1D	ES-337898	▲ SW SLIDE 00120163 01-2 (U) (VOLTAGE CHANGE)
1-3D	EW-374894	▲ AC CORD 2 CORES VM-0129A,VFF U/T (U)

FINAL ASSEMBLY BLOCK



-PARTS LIST AP-B1/C-

2. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
BACK COVER BLOCK		
2-1	SA-332577	INSULATOR
ELEVATION LEVER BLOCK		
2-2	ES-316432	△ SW MICRO K2 EUC (SW901)
2-3	ZG-313071	SP T1-6.3/0.5-22.4 T1-183
FINAL ASSEMBLY BLOCK		
2-4	BC-348320A	CABINET
2-4P	BC-348320B	CABINET-P
2-4S	BC-348320C	CABINET-S (AP-B1-S)
2-5	TP-345341	SHAFT ELEVATION
2-6	ZG-325402	SP ELEVATION
2-7	TP-B332568	ARM ELEVATION PART
2-8	ZG-332548	SP PUSH (A)
2-9	ZS-336690	PAN20×10STL BNI
2-10	TP-B345367	CHASSIS SPINDLE PART
2-11	MV-269965	BALL 400STL
2-12	ML-345348	LEVER AUTO
2-13	TP-P1034A080A	GEAR MAIN BLK AP-B1
2-14	ZW-270101	RING E300SUP CMT
2-15	BM-348334	△ MOTOR (PULLEY) BFB2R28
2-16	MB-345351	RUBBER CUSHION
2-17	ZS-350767	SCREW
2-18	TP-B332571	CLAMPER ARM PART
2-19	SK-345361A	KNOB CUT
2-19P	SK-345361B	KNOB CUT-P
2-20	ZG-3455358	SP PUSH KNOB CUT
2-21	TP-711676	TONE ARM ASSY ARM-3(B)
2-22	TP-711675	MAIN WEIGHT
2-23	ZW-325521	M120×170×30STL CMT P100
2-24	SK-345360A	KNOB CANCELLER
2-24P	SK-345360B	KNOB CANCELLER-P
2-25	ZW-345340	PW BEND
2-26	ZS-609096	T2PAN23×0.5STL CMT
2-27	ML-343053	LEVER CANCELLER
2-28	ZG-343052	SP TORSION CANCELLER
2-29	ZW-340648	RING CS190STL PKR
2-30	SK-345362A	KNOB ELEVATION
2-30P	SK-345362B	KNOB ELEVATION-P
2-31	TP-P1034A040A	PU PLATE BLK AP-B1
2-32	TP-345354	LEVER REJECT
2-33	ZG-345357	SP TORSION KNOB CUT
2-34	SK-345363A	KNOB SWITCH
2-34S	SK-345363C	KNOB SWITCH-S
2-35	BC-B332582	DUST COVER PART
2-36	TP-336361	AUTO HINGE OH-5
2-37	TP-348321	PLATTER
2-38	TP-348266B	TABLE SHEET B
2-39	MB-302866	BELT
2-40	TP-711673	HEAD SHELL HS-1

MODEL AP-D2/C

RECOMMENDED SPARE PARTS

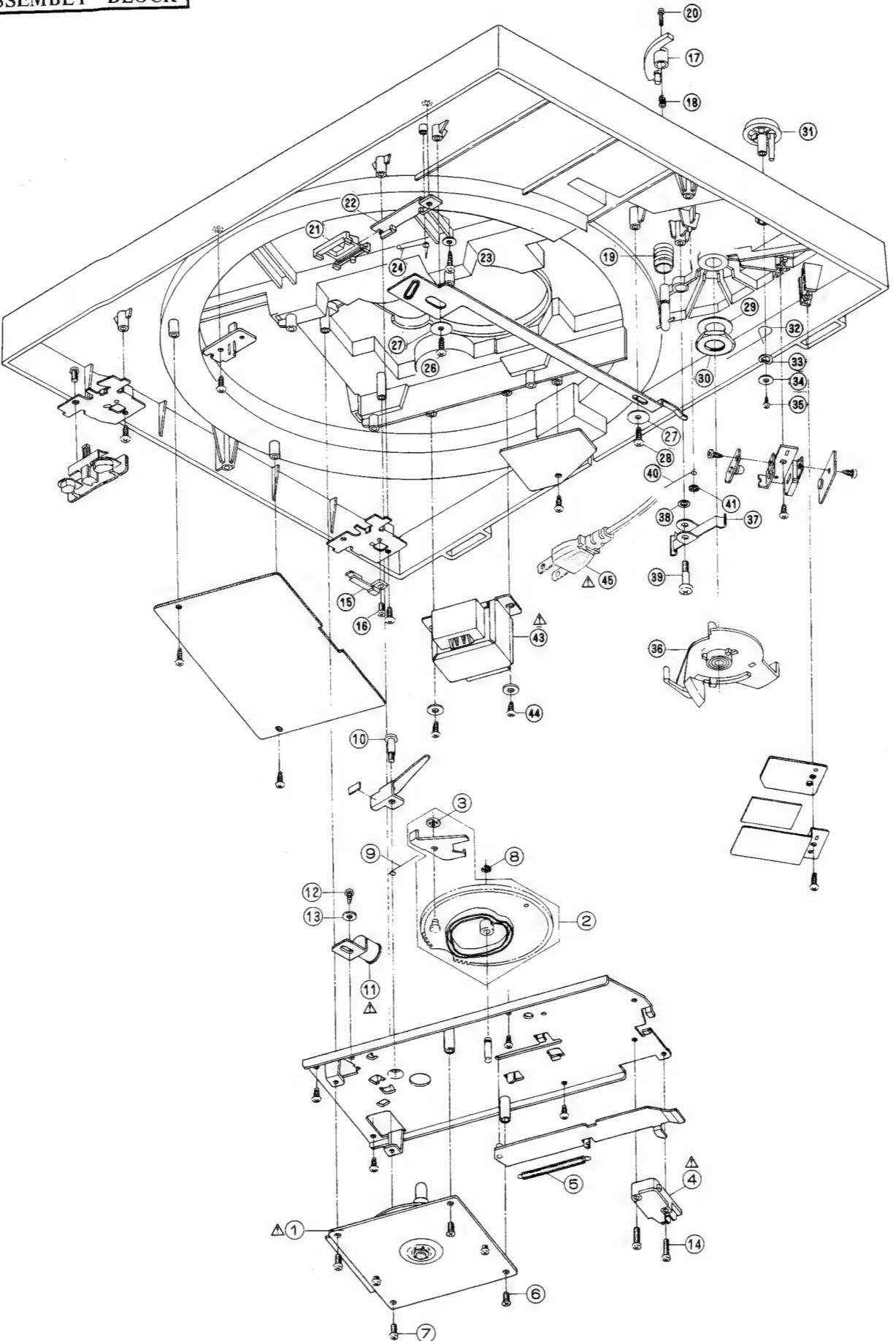
Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

REF. NO.	PARTS NO.	DESCRIPTION
1	BM-P1021A060A	△ MOTOR BLK AP-D210
2	BT-336790	△ TRANS POWER APT210-30 (C,A)
3	BT-336791	△ TRANS POWER APT210-40 (E)
4	BT-336815	△ TRANS POWER APT210-50 (B,S)
5	BT-336789	△ TRANS POWER APT210-70 (U)
6	ED-322238	△ D SILICON 1B4B41 100/1.0A
7	ED-322773	D LED SLP-255D-01 GRN
8	ED-325341	D LED TLR103 RED
9	ED-321115	D SILICON 1S1588LB-5 F10
10	ED-336823	D ZENER H 05Z4.7 X
11	ED-324194	D ZENER H 05Z5.1 X
12	ED-323535	D ZENER H 05Z8.2 X
13	EF-300599	△ FUSE FST3100 T 250V 0.40A (F1) (B)
14	EF-300599	△ FUSE FST3100 T 250V 0.40A (F4) (E,V,S,B)
15	EF-300599	△ FUSE FST3100 T 250V 0.40A (F3) (E,V,S,B)
16	EF-327103	△ FUSE TSC A 250V 0.50A (F1) (U)
17	EF-327103	△ FUSE TSC A 250V 0.50A (F2) (U)
18	EF-327103	△ FUSE TSC A 250V 0.50A (F3) (U)
19	EF-327103	△ FUSE TSC A 250V 0.50A (F4) (U)
20	EF-309390	△ FUSE TSC 125V 0.50A (F4) (A,C)
21	EF-309390	△ FUSE TSC 125V 0.50A (F3) (A,C)
22	EI-336761	IC LA6458S
23	EP-336821	△ SOLENOID NX-9332H
24	ES-336814	SW LEAF MSW-1150NBK 01-1 N0 (SW902)
25	ES-325488	SW MICRO K1 UCE (SW901)
26	ES-307576	SW PUSH SUJ12 2-02-02N
27	ET-318237	△ TR 2SB764 E,F
28	ET-325482	△ TR 2SC1959 Y
29	ET-318239	△ TR 2SD863 E,F
30	ET-336819	PHOTO SENSOR MKY-76C348/A.K
31	ET-336816	TR FET 2SK30A R
32	ET-325501	TR 2SA1015 O,Y
33	ET-306705	TR 2SC1815 O,Y
34	ET-316643	TR 2SC536K-NP F,G
35	EV-315412	R S-FIX H D8 3P 502
36	EV-341246	R S-FIX V TM8KH1-1S 3P 0.50W 302

1. DD SERVO P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-1A	BA-P1021A140A	PC DD SERVO BLK AP-D210(A)
1-1E	BA-P1021A140B	PC DD SERVO BLK AP-D210 (E) (E,V,S)
1-1U	BA-P1021A140C	PC DD SERVO BLK AP-D210- (U)
1-1B	BA-P1021A140E	PC DD SERVO BLK AP-D210- (B)
1-1C	BA-P1021A140F	PC DD SERVO BLK AP-D210- (C)
		DD SERVO P.C BOARD
1-IC1A	EI-336761	IC LA6458S
1-IC2A	EI-336761	IC LA6458S
1-TR1A to 4AET	ET-306705	TR 2SC1815 O,Y
1-TR5A	ET-325501	TR 2SA1015 O,Y
1-TR6A,7A	ET-306705	TR 2SC1815 O,Y
1-TR8A	ET-336816	TR FET 2SK30A R
1-TR9A,10A	ET-316643	TR 2SC536K-NP F,G
1-TR11A	ET-325501	TR 2SA1015 O,Y
1-TR12A	ET-306705	TR 2SC1815 O,Y
1-TR13A	ET-325482	△ TR 2SC1959 Y
1-TR14A	ET-336816	TR FET 2SK30A R
1-TR15A,16A	ET-325501	TR 2SA1015 O,Y
1-TR17A,18A	ET-306705	TR 2SC1815 O,Y
1-TR19A	ET-318239	△ TR 2SD863 E,F
1-TR20A	ET-318237	△ TR 2SB764 E,F
1-TR21A	ET-318239	△ TR 2SD863 E,F
1-TR22A	ET-318237	△ TR 2SB764 E,F
1-D1A	ED-324194	D ZENER H 05Z5.1 X
1-D2A	ED-323535	D ZENER H 05Z8.2 X
1-D3A	ED-324194	D ZENER H 05Z5.1 X
1-D4A	ED-336823	D ZENER H 05Z4.7 X
1-D5A	ED-321115	D SILICON H 1S1588LB-5 F10
1-D6A	ED-322238	D SILICON 1B4B41 100/1.0A
1-VR1A	EV-315412	R S-FIX H D8 3P 502
1-R8A	ER-336820	△ R MF H F10 1/4W 4703F
1-R12A	ER-318319	△ R MF H F10 1/4W 1002F
1-R13A	ER-318317	△ R MF H F10 1/4W 8201F
1-R19A	ER-308849	△ R CB H S12 FS RD 1/4W 221J
1-R20A	ER-308873	△ R CB H S12 FS RD 1/4W 151J
1-R37A	ER-308849	△ R CB H S12 FS RD 1/4W 221J
1-R57A	ER-304256	△ R OMH 2W 560J
1-R58A	ER-308849	△ R CB H S12 FS RD 1/4W 221J
1-C6A	EC-309115	C COMP V AWS 104J 50DC
1-F3AA	EF-309390	△ FUSE TSC 125V 0.50A (A,C)
1-F3AE	EF-300599	△ FUSE FST3100 T 250V 0.40A (E,V,S,B)
1-F3AU	EF-327103	△ FUSE TSC A 250V 0.50A (U)
1-F4AA	EF-309390	△ FUSE TSC 125V 0.50A (A,C)
1-F4AE	EF-300599	△ FUSE FST3100 T 250V 0.40A (E,V,S,B)
1-F4AU	EF-327103	△ FUSE TSC A 250V 0.50A (U)
		FUSE P.C BOARD
1-C1BA	EC-314688	△ C CE V FZ 103P 125AC (A,C)
1-C1BE	EC-330308	△ C MMY V ECQUF 103M 250AC (E,V,S,B)
1-C1BU	EC-320548	△ C CE V F 103Z 250AC (U)
1-F1BU	EF-327103	△ FUSE TSC A 250V 0.50A (U)
1-F1BB	EF-300599	△ FUSE FST3100 T 250V 0.40A (B)
1-F2BU	EF-327103	FUSE TSC A 250V 0.50A (U)
		PUSH SWITCH P.C BOARD
1-SW1C	ES-307576	SW PUSH SUJ12 2-02-02N
1-VR1C,2C	EV-341246	R S-FIX V TM8KH1-1S 3P 0.50W 302
1-R1C	ER-318318	△ R MF H F10 1/4W 9101F
1-R2C	ER-318337	△ R MF H F10 1/4W 6801F
		SERVO LOCK LED P.C BOARD
1-D10	ED-322273	D LED SLP-255D-01 GRN
1-D1E	ED-325341	D LED TLR103 RED
		CDS. P.C BOARD
1-CDS1F	ET-336819	PHOTO SENSOR MKY-76C348/A.K
		INTERMEDIATE P.C BOARD
1-P1G	EW-344164	CORD 2P AUDIO PIN X 2

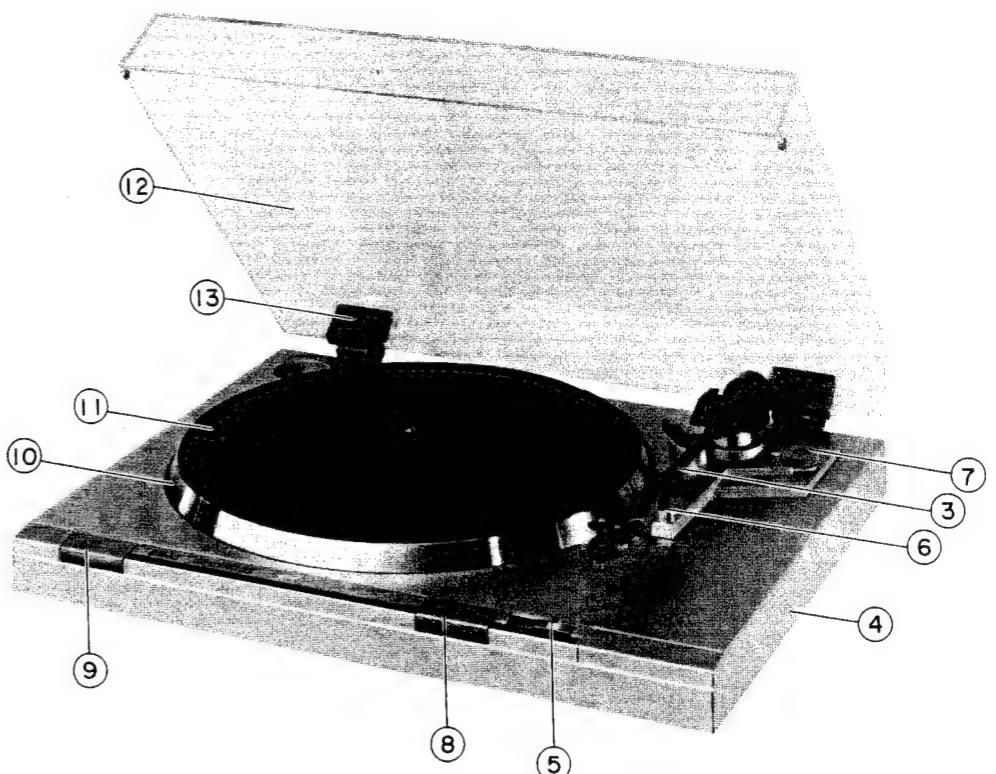
ASSEMBLY BLOCK



2. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1	BM-P1021A060A	MOTOR BLK AP-D210 △MOTOR BLK AP-D210
2-2	TP-P1021A070A	MAIN GEAR BLOCK GEAR MAIN BLK AP-D210
2-3	ZW-653163	RING CS280STL PKR
2-4	ES-325488	SW MICRO BLOCK △ SW MICRO K1 UCE (SW901)
2-5	ZG-313008	CHASSIS MAIN BLOCK SP T1-4.0/0.4-50.0 T1-121
2-6	ZS-414033	CTS30x08STL CMT
2-7	ZS-666336	T2PAN30x08STL CMT
2-8	ZW-290283	RING U 285SUP CMT
2-9	ZG-332558	SP TOSION REJECT
2-10	MS-302757	STOPPER SHAFT
2-11	EP-336821	△ SOLENOID NX-9332H
2-12	ZS-343165	CT BR30x06STL CMT
2-13	ZW-261382	PW31x080x030STL
2-14U	ZS-119670	PAN30x12STL CMT (U,C,A)
2-14E	ZS-348294	PAN30x12GL-G (E,B,S,V)
2-15	ES-336814	SW LEAF MSW-1150NBK 01-1 NO (SW902)
2-16	ZS-468101	T2PAN26x06STL CMT
2-17	TP-B332568	ASSEMBLY BLOCK ARM ELEVATION PART
2-18	ZG-332548	SP PUSH (A)
2-19	ZG-325402	SP ELEVATION
2-20	ZS-572804	PAN20x10STL NI3
2-21	SK-332583D	KNOB ELEVATION (B)
2-21P	SK-332583C	KNOB ELEVATION (B)-P
2-22	SK-332584D	GUIDE KNOB (B)
2-22P	SK-332584C	GUIDE KNOB (B)-P
2-23	ZS-310984	PT BR30x08STL CMT
2-24	ZG-332549	SP TORSION STOPPER
2-25	ZW-324147	PW31x130x100NYL
2-26	ZS-323993	PT RB3010STL CMT
2-27	ZS-609131	T2PAN30x12STL CMT
2-28	ZW-259481	PW31x080x030NYL
2-29	ZW-336398	PW130x200x050STL CMT
2-30	ZW-325521	N120x170x30STL CMT P100
2-31	SK-332551E	KNOB CANCELLER (C)
2-31P	SK-332551D	KNOB CANCELLER (B)-P
2-32	ZG-332552A	SP TORSION CANCELLER (A)
2-33	ZW-315478	WAVE WASHER D5 SUS
2-34	ZW-429120	PW23x090x050STL CMT
2-35	ZS-669104	T2PAN23x06STL CMT
2-36	TP-P1021A090A	LEVER PU BLK AP-D210
2-37	TP-332559	LEVER BRAKE
2-38	ZW-616004	PW31x080x100STL CMT
2-39	ZS-325426	TAPPING ROLLER SCREW
2-40	ZG-332558B	SP TORSION REJECT (B)
2-41	ZW-340648	RING CS190STL PKR
2-42X	ZG-325402	SP ELEVATION
2-43U	BT-336789	△ TRANS POWER APT210-70 (U)
2-43C	BT-336790	△ TRANS POWER APT210-30 (C,A)
2-43E	BT-336791	△ TRANS POWER APT210-40 (E)
2-43B	BT-336815	△ TRANS POWER APT210-50 (B,S)
2-44	ZS-310984	PT BR30x08STL CMT
2-45U	EW-306428	△ AC CORD 2 CORES KP-205A, VFF U/T (U)
2-45C	EW-305691	△ AC CORD 2 CORES KP-8, SPT-1 UC (C,A)
2-45E	EW-313882	△ AC CORD 2 CORES KP-419C, LTCE-2F E (E,V)
2-45B	EW-347023	△ AC CORD LTBS-2F 42/0.15 x2 B (B)
2-45S	EW-201515	△ AC CORD 2 CORES KP-560, LTSA-2F S (S)

FINAL ASSEMBLY BLOCK



3. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
COVER BOTTOM BLOCK		
3-1x	SP-332564	COVER BOTTOM
3-2x	SA-332577	INSULATOR
TONE ARM BLOCK		
3-3	TP-336839	TONE ARM W/SHELL ARM-210
FINAL ASSEMBLY BLOCK		
3-4	BC-332581C	CABINET (B)
3-4P	BC-332581D	CABINET (B)-P
3-5	SK-332583D	KNOB ELEVATION B(B)
3-5P	SK-332583C	KNOB ELEVATION(B)-P
3-6	TP-B332571	CLAMPER ARM PART
3-7	SK-332551E	KNOB CANCELLER (C)
3-7P	SK-332551D	KNOB CANCELLER (B)-P
3-8	SK-332560G	KNOB SW (B-2)
3-8P	SK-332560H	9EK03SW (B-2)-P
3-9	SK-332560E	KNOB SW (A-2)
3-9P	SK-332560F	KNOB SW (A-2)-P
3-10	TP-B332578	PLATTER PART
3-11	TP-332566A	TABLE SHEET (A)
3-12	BC-B332582	DUST COVER PART
3-13	TP-336361	AUTO HINGE OH-5

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1. MODEL AP-B1/C

PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
BC-B332582	2-35								
BC-348320A	2-4								
BC-348320B	2-4P								
BC-348320C	2-4S								
BM-348334	2-15								
BT-348330	1-T1AU								
BT-348331	1-T1AC								
BT-348332	1-T1AE								
BT-348333	1-T1AB								
ED-322238	1-D1A								
ES-316432	2-2								
ES-337898	1-SW1D								
ES-348289	1-SW1C								
EV-475470	1-VR1C								
EV-523214	1-VR2C								
EW-207742	1-1AC								
EW-336923	1-1AE								
EW-336924	1-1AS								
EW-344164	1-2B								
EW-347023	1-1AB								
EW-374894	1-3D								
MB-302866	2-39								
MB-345351	2-16								
ML-343053	2-27								
ML-345348	2-12								
MV-269965	2-11								
SA-332577	2-1								
SK-345360A	2-24								
SK-345360B	2-24P								
SK-345361A	2-19								
SK-345361B	2-19P								
SK-345362A	2-30								
SK-345362B	2-30P								
SK-345363A	2-34								
SK-345363C	2-34S								
TP-B332568	2-7								
TP-B332571	2-18								
TP-B345367	2-10								
TP-P1034A040A	2-31								
TP-P1034A080A	2-13								
TP-336361	2-36								
TP-345341	2-5								
TP-345354	2-32								
TP-348266B	2-38								
TP-348321	2-37								
TP-711673	2-40								
TP-711675	2-22								
TP-711676	2-21								
ZG-313071	2-3								
ZG-325402	2-6								
ZG-332548	2-8								
ZG-343052	2-28								
ZG-345357	2-33								
ZG-345358	2-20								
ZS-336690	2-9								
ZS-350767	2-17								
ZS-609096	2-26								
ZW-270101	2-14								
ZW-325521	2-23								
ZW-340648	2-29								
ZW-345340	2-25								

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2. MODEL AP-D2/C

PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
BA-P1021A140A	1-1A	ET-336816	1-TR8A						
BA-P1021A140B	1-1E	ET-336816	1-TR14A						
BA-P1021A140C	1-1U	ET-336819	1-CDS1F						
BA-P1021A140E	1-1B	EV-315412	1-VR1A						
BA-P1021A140F	1-1C	EV-341246	1-VR1C						
BC-B32582	3-12	EV-341246	1-VR2C						
BC-332581C	3-4	EW-201515	2-45S						
BC-332581D	3-4P	EW-305691	2-45C						
BM-P1021A060A	2-1	EW-306428	2-45U						
BT-336789	2-43U	EW-313882	2-45E						
		EW-344164	1-P1G						
BT-336790	2-43C	EW-347023	2-45B						
BT-336791	2-43E	MS-302757	2-10						
BT-336815	2-43B	SA-332577	3-2x						
EC-309115	1-C6A	SK-332551D	2-31P						
EC-314688	1-C1BA	SK-332551D	3-7P						
EC-320548	1-C1BU	SK-332551E	2-31						
EC-330308	1-C1BE	SK-332551E	3-7						
ED-321115	1-D5A	SK-332560E	3-9						
ED-322238	1-D6A	SK-332560F	3-9P						
ED-322773	1-D1D	SK-332560G	3-8						
ED-323535	1-D2A	SK-332560H	3-8P						
ED-324194	1-D1A	SK-332583C	2-21P						
ED-324194	1-D3A	SK-332583C	3-5P						
ED-325341	1-D1E	SK-332583D	2-21						
ED-336823	1-D4A	SK-332583D	3-5						
EF-300599	1-F3AE	SK-332584C	2-22P						
EF-300599	1-F4AE	SK-332584D	2-22						
EF-300599	1-F1BB	SP-332564	3-1x						
EF-309390	1-F3AA	TP-B332568	2-17						
EF-309390	1-F4AA	TP-B332571	3-6						
EF-327103	1-F3AU	TP-B332578	3-10						
EF-327103	1-F4AU	TP-P1021A070A	2-2						
EF-327103	1-F1BU	TP-P1021A090A	2-36						
EF-327103	1-F2BU	TP-332559	2-37						
EI-336761	1-IC1A	TP-332566A	3-11						
EI-336761	1-IC2A	TP-336361	3-13						
EP-336821	2-11	TP-336839	3-3						
ER-304256	1-R57A	ZG-313008	2-5						
ER-308849	1-R19A	ZG-325402	2-19						
ER-308849	1-R37A	ZG-325402	2-42x						
ER-308849	1-R58A	ZG-332548	2-18						
ER-308873	1-R20A	ZG-332549	2-24						
ER-318317	1-R13A	ZG-332552A	2-32						
ER-318318	1-R1C	ZG-332558	2-9						
ER-318319	1-R12A	ZG-332558B	2-40						
ER-318337	1-R2C	ZS-310984	2-23						
ER-336820	1-R8A	ZS-310984	2-44						
ES-307576	1-SW1C	ZS-323993	2-26						
ES-325488	2-4	ZS-325426	2-39						
ES-336814	2-15	ZS-343165	2-12						
ET-306705	1-TR1A	ZS-348294	2-14E						
ET-306705	1-TR2A	ZS-414033	2-6						
ET-306705	1-TR3A	ZS-419670	2-14U						
ET-306705	1-TR4A	ZS-468101	2-16						
ET-306705	1-TR6A	ZS-572804	2-20						
ET-306705	1-TR7A	ZS-609131	2-27						
ET-306705	1-TR12A	ZS-666336	2-7						
ET-306705	1-TR17A	ZS-669104	2-35						
ET-306705	1-TR18A	ZW-259481	2-28						
ET-316643	1-TR9A	ZW-261382	1-13						
ET-316643	1-TR10A	ZW-290283	2-8						
ET-318237	1-TR20A	ZW-315478	2-33						
ET-318237	1-TR22A	ZW-324147	2-25						
ET-318239	1-TR19A	ZW-325521	2-30						
ET-318239	1-TR21A	ZW-336398	2-29						
ET-325482	1-TR13A	ZW-340648	2-41						
ET-325501	1-TR5A	ZW-429120	2-34						
ET-325501	1-TR11A	ZW-616004	2-38						
ET-325501	1-TR15A	ZW-653163	2-3						
ET-325501	1-TR16A								

SCHEMATIC DIAGRAM

SECTION 4

AP-BI/C

